

Patent claims

1 1. A reactor bottom (2) of a reactor (1)
2 with a collecting funnel (7) formed with an upper side
3 (5),
4 with a receiving opening (15) formed in the collecting
5 funnel (7) and which connects to an outlet passage (18) extending
6 through the reactor bottom (2),
7 and with a closure part (16) for the harvesting opening
8 (15) which is movably arranged in the reactor bottom (2) and
9 displacable between a closed position in which it closes the
10 harvesting opening (17) of the collecting funnel (7), and a
11 discharge position in which it is lowered in the reactor bottom (2)
12 and establishes a connecting between the harvesting opening (15)
13 and the outlet passage (18).

1 2. The reactor bottom according to claim 1 characterized
2 in that the surface (17) of the closure part (16) is configured as
3 a guide or baffle surface for guiding the reactor content from the
4 harvesting opening (15) into the outlet passage (18).

1 3. The reactor bottom according to claim 1 or 2
2 characterized in that the surface (17) of the closure part (16)
3 forms a collecting region (26) at a deep lying level whereby the
4 collecting region (26) in the lowered discharge position of the
5 closure part (16) is juxtaposed with the outlet passage (18).

1 4. The reactor bottom according to claim 3 characterized
2 in that the collecting region (26) on the surface (17) of the
3 closure part (16) is configured with a point shape or line shape.

1 5. The reactor bottom according to one of the claims 1 -
2 4 characterized in that the harvesting opening (15) is located
3 eccentrically to the central axis (6) of the collecting funnel (7)
4 and especially the edge of the harvesting opening (15) coincides
5 with the central axis (6) of the collecting funnel (7).

1 6. The reactor bottom according to one of claims 1 - 5
2 characterized in that the surface (17) of the closure part (16) is
3 inclined with respect to the central axis (6) or is domed.

1 7. The reactor bottom according to one of claims 1 - 6
2 characterized in that the surface (17) of the closure part (16) is
3 flush in its closed position to the surface of the collecting
4 funnel (7).

1 8. The reactor bottom according to one of claims 1 - 7
2 characterized in that an outlet recess extends in the reactor
3 bottom (2) from the harvesting opening (15) and is especially
4 parallel to the central axis (6) of the collecting funnel (7) and
5 receives the closure part (16) slidably and at least one outlet
6 passage (18) opens into the outlet recess (13).

1 9. The reactor bottom according to claim 8 characterized
2 in that an annular groove (25) is formed in the wall (14) of the
3 outlet recess (13) and/or a plurality of openings are formed
4 therein, which communicate with the outlet passage (18).

1 10. The reactor bottom according to one of claims 1 - 9
2 characterized in that at least one discharge passage (23) opens
3 into the collecting funnel (7) and is closed with a sieve (24).

1 11. The reactor bottom according to one of claims 1 - 10
2 characterized in that the reactor bottom (2) is formed in one piece
3 with the reactor (1) or the reactor wall (11) or that the reactor
4 (1) or the reactor wall (11) is detachably connected to the reactor
5 bottom (2) and is fixed on the upper side (5) of the reactor bottom
6 (2) such that the reactor wall (11) surrounds the collecting funnel
7 (7).

1 12. The reactor bottom according to one of claims 1 - 11
2 characterized in that the closure part (16) is displaceable manually
3 or by means of a drive device (20, 21, 22) arranged on the reactor
4 bottom (2).

1 13. The reactor bottom according to one of claims 1 - 12
2 characterized in that the funnel or conical angle of the collecting
3 funnel (7) is substantially 130° to 170°, especially 153°.

1 14. A method of separating a phase from a phase mixture
2 in a reactor with a reactor bottom according to one of claims 1 -
3 13 whereby the phase mixture is introduced into the reactor, the
4 phases are separated and in the closed position of the closure
5 part, deposits on the collecting funnel and then a connection is
6 opened between the harvesting opening and the outlet passage
7 whereby the desired phase is discharged through the harvesting
8 opening and the outlet passage of the reactor.

1 15. The method according to claim 14 characterized in
2 that the phase mixture is a mixture of solid and liquid phases and
3 the phase separation is carried by sedimentation.

1 16. The method according to claim 14 or 15 characterized
2 in that the phase mixture is a hardening bath and capsules are
3 contained in the hardening bath as the phase to be separated.

1 17. The method according to claim 16 characterized in
2 that especially before the withdrawal of the capsule in a further
3 method step the hardening bath is discharged through the discharge
4 passage and rinsing liquid is introduced into the reactor and is
5 then discharged through the discharge passages, this method step
6 being carried out once or a number of times.

1 18. The method according to claim 16 or 17 characterized
2 in that the capsules are sodium cellulose capsules.

1 19. The method according to one of claims 16 - 18
2 characterized in that the capsules contain biological cells,
3 especially animal, human or plant cells.